

Inventor: RAYBONE ET AL  
 Serial No. 10/089,238  
 Group Art Unit 1753  
 Examiner: VerSteeg

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

23. (Currently amended) A method of treating gases which contain nitrogen oxides, carbonaceous particulates including soot, hydrocarbons, and other residual constituents including oxygen, which method comprises passing the gases through a reactor comprising ~~a~~ at least one bed of active material in an enclosure having gas flow conduits for directing gas flow through or over the bed of active material, applying an electrical potential to generate a non-thermal plasma in gas permeating the active material, at least a component of the active material being such as to adsorb or trap carbonaceous particulates ~~including soot~~, the electrical potential being applied to generate said non-thermal plasma during passage through the active material of the gases undergoing treatment and the component of active material is such as selectively to adsorb or trap carbonaceous particulates and the gases are further subjected to the action of a NO selective catalyst comprising silver doped alumina which selectively absorbs both NO and hydrocarbons and/or partially oxygenated hydrocarbons and promotes their reaction together to reduce NO directly to N<sub>2</sub> ~~whereby the trapped carbonaceous particulates including soot have a longer effective residence time in the non-thermal plasma relative to species in the gas flow which are not adsorbed or trapped and are oxidized by oxidative species present in the gases while conversion of NO to NO<sub>2</sub> is much less likely to occur.~~

24. (Cancelled)

25. (Currently amended) A method as claimed in claim 23

Inventor: RAYBONE ET AL  
Serial No. 10/089,238  
Group Art Unit 1753  
Examiner: VerSteege

24, wherein the gases subjected to the action of a NO selective catalyst are also subjected to further plasma activation which promotes the formation of activated hydrocarbons and/or partially oxygenated hydrocarbons.

26. (Cancelled)

27. (Previously presented) A method as claimed in claim 23, wherein the bed of active material comprises beads of alumina.

28. (Previously presented) A method as claimed in claim 23, wherein the bed of active material includes a combustion catalyst.

29. (Currently amended) A method as claimed in claim 28, wherein the combustion catalyst comprises one or more materials selected from the group consisting of alkali metal oxide,